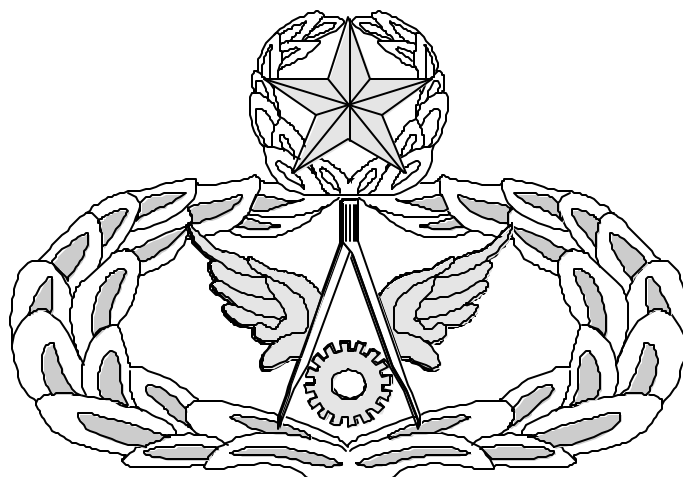


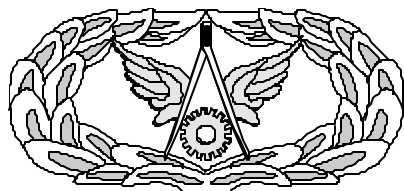
DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington DC 20330-5000

CFETP 3E5X1
Parts I and II
1 April 2002

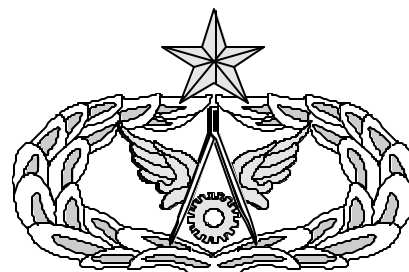
AFSC 3E5X1 ENGINEERING



MASTER



BASIC



SENIOR

**CAREER FIELD
EDUCATION AND TRAINING PLAN**

**CAREER FIELD EDUCATION AND TRAINING PLAN
ENGINEERING SPECIALTY
3E5X1**

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PREFACE

1. This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements, training support resources, and minimum core task requirements for this specialty. The CFETP will provide personnel a clear career path to success and instill rigor in all aspects of career field training.

2. The CFETP consists of two parts; both parts of the plan are used by supervisors to plan, manage, and control training within the career field.

2.1. Part I provides information necessary for overall management of the specialty.

2.1.1. Section A provides general information about how the CFETP will be used.

2.1.2. Section B identifies career field progression information, duties and responsibilities, training strategies, and career field path.

2.1.3. Section C associates each skill-level with specialty qualifications (knowledge, education, and training).

2.1.4. Section D indicates resource constraints.

2.1.5. Section E identifies transition training guide requirements for SSgt through MSgt.

2.2. Part II includes the following:

2.2.1. Section A identifies the Specialty Training Standard (STS) to include duties, tasks, and technical references to support Air Education and Training Command (AETC) conducted training, wartime course, and correspondence course requirements.

2.2.2. Section B contains the course objective list and training standards supervisors will use to determine if airmen satisfy training requirements.

2.2.3. Section C identifies available support materials. Qualification Training Packages (QTPs) and CerTests support both upgrade training (UGT) and qualification training. QTPs are indexed in AF Index (AFIND) 8, Numerical Index of Specialized Educational Training Publications.

2.2.4. Section D identifies a training course index supervisors can use to determine resources available to support training. Included here are both mandatory and optional courses, as well as exportable courseware.

2.2.5. Section E identifies MAJCOM-unique training requirements supervisors can use to determine additional training required for the associated qualification needs.

2.2.6. Section F identifies home station training references and courses for this specialty in support of contingency/wartime training.

3. Using guidance provided in the CFETP will ensure individuals in this specialty receive effective and efficient training at the appropriate point in their careers. This plan will enable us to train today's work force for tomorrow's jobs. At unit level, supervisors and trainers will use Part II to identify, plan, and conduct training commensurate with the overall goals of this guide.

ABBREVIATIONS/TERMS EXPLAINED

Advanced Training (AT). A formal course which provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

Advanced Distributive Learning (ADL): Anytime, anyplace learning within the DoD consisting of instructional modules comprised of sharable content objectives in an Internet/Intranet environment.

Air Force Career Field Manager (AFCFM). An individual on the Air Staff charged with the responsibility for overseeing all training and career field management aspects of an Air Force specialty or group of specialties.

Air Force Job Qualification Standard/Command Job Qualification Standard (AFJQS/CJQS). A comprehensive task list that describes a particular job type or duty position. Supervisors use them to document task qualifications. The tasks on AFJQS/CJQS are common to all persons serving in the described duty position.

Air Force Qualification Training Package (AFQTP). A task knowledge package designed to aid qualification in a duty position or program, or on a piece of equipment. AFQTPs identify the Air Force's standardized method for performing the task. The AFQTP may be printed (paper-based), computer-based, or in other audiovisual media. Completion of all CE AFQTPs is mandatory for upgrade to the 5 and 7 skill levels.

Career Field Education and Training Plan (CFETP). A CFETP is a comprehensive, multipurpose document encapsulating the entire spectrum of education and training for a career field. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, to eliminate duplication, and to ensure this training is budget defensible.

Certification and Testing (CerTest). A multi-media evaluation program used to test an individual's knowledge of principals and procedures in their career field.

Commercial Off The Shelf (COTS). Commercially procured training products.

Computer Based Training (CBT). A self-paced stand-alone computer product used to deliver interactive subject and task knowledge.

Continuation Training. Additional training exceeding requirements with emphasis on present and future duty assignments.

Core Task. A task Air Force Career Field Managers (AFCFMs) identified as a minimum qualification requirement within an Air Force specialty or duty position. These tasks exemplify the essence of the career field.

Course Objective List (COL). A publication derived from initial/advanced skills course training standard, identifying the tasks and knowledge requirements, and respective standards provided to achieve a 3-, 5-, and 7-skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with AFI 36-2201, Developing, Managing, and Conducting Training.

Critical Task. Tasks that have been identified by the workcenter supervisor as having a detrimental effect on mission accomplishment if not performed correctly. Critical tasks may or may not be the

same as core tasks but are mandatory if identified as 'critical' to the individual's position by the supervisor or workcenter.

Diamond Tasks. Considered contingency/war tasks for both the 5- and 7-skill level and are extremely important to the career field. Equipment shortfalls at most locations however, have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training.

Distance Learning (DL). Includes video teleseminar (VTS), video teletraining (VTT), and computer based training (CBT). Formal courses that a training wing or a contractor develops for export to a field location (in place of resident training) for trainees to complete without the on-site support of the formal school instructor. For instance, courses are offered by Air Force Institute of Technology, Air University, and Training Detachment.

Duty Position Task. The tasks assigned to an individual for the position currently held. These include as a minimum all core tasks, critical tasks, and any other tasks assigned by the supervisor.

Enlisted Specialty Training (EST). A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in each skill level of a specialty.

Exportable Training. Additional training via computer-assisted, paper text, interactive video, or other necessary means to supplement training.

Field Technical Training (Type 4). Special or regular on-site training conducted by a field training detachment (FTD) or by a mobile training team (MTT).

Initial Skills Training. AFS-specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training wings.

Instructional System Development (ISD). A deliberate and orderly, but flexible, process for planning, developing, implementing, and managing instructional systems. It ensures personnel are taught the knowledge, skills, and attitudes essential for successful job performance.

Just-in-Time Training (JIT). Mission support training received just prior to a deployment.

Mission Ready Airmen (MRA) Training. Initial skills training allowing airmen to perform select tasks unsupervised equal to 3-levels with one year of experience.

Occupational Survey Report (OSR). A detailed report showing the results of an occupational survey of tasks performed within a particular AFS.

On-the-Job Training (OJT). Dual track system of providing subject/task knowledge and hands-on, over-the-shoulder training. OJT is conducted to certify personnel in both upgrade (skill level award) and job qualification (duty position certification) training.

Optimal Training. The ideal combination of training settings resulting in the highest levels of proficiency on specified performance requirements within the minimum time possible.

Proficiency training is additional training, either in-residence, exportable advanced training courses, or on-the-job training, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

Qualification Training (QT). Actual hands-on task performance training designed to qualify an individual in a specific duty position. This portion of the dual channel on-the-job training program occurs both during and after the upgrade training process. It is designed to provide the performance skills required to do the job.

Readiness Training Package (RTP). Establishes standard levels of knowledge and proficiency for common Disaster Preparedness and readiness subject areas by providing instructors with training references, materials, and lesson objectives used in teaching and evaluating the course subject matter.

Representative Sites. Typical organizational units having similar missions, weapon systems or equipment, or a set of jobs, used as a basis for estimating average training capacities and costs within the Training Impact Decision System (TIDES).

Resource Constraints. Resource deficiencies, such as money, facilities, time, manpower, or equipment that precludes desired training from being delivered.

Skills Training. A formal course resulting in the award of a skill level.

Specialty Training. A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade airmen in the award of a skill level.

Specialty Training Standard (STS). Describes skills and knowledge that airmen in a particular AFS need on the job. It further serves as a contract between the Air Education and Training Command (AETC) and the user to show the overall training requirements for an AFS taught in the resident and nonresident courses.

Spin-up Training: Training required just prior to a select deployment that delivers training necessary for mission accomplishment. It is typically predicated on hard to attain contingency skills.

Standard. An exact value, a physical entity, or an abstract concept, established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results; a fixed quantity or quality.

Supplemental Training. Training for a portion of an AFS without a change in AFSC. Formal training on new equipment, methods, and technology that are not suited for on-the-job training.

Total Force. All collective Air Force components (active duty, Reserve, Guard, and civilian elements) of the United States Air Force.

Training Capacity. The capability of a training setting to provide training on specified requirements, based on the availability of resources.

Training Impact Decision System (TIDES). A computer-based decision support technology designed to assist Air Force career field managers (AFCFMs) in making critical judgments relevant to what training should be provided to personnel within career fields, when training should be provided (at what career points), and where training should be conducted (training setting). A TIDES template is used Air Force-wide for standardization and formatting of CFETPs.

Training Planning Team (TPT). Comprised of the same personnel as a U&TW, however TPTs are more intimately involved in training development and the range of issues is greater than is normal in the U&TW forum.

Training Requirements Analysis. A detailed analysis of tasks for a particular AFS to be included in the training decision process.

Upgrade training identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 5-, 7-, and 9-skill levels.

Utilization and Training Workshop (U&TW). A forum of the AFCFM, MAJCOM Functional Managers (MFMs), Subject Matter Experts (SMEs), and AETC training personnel that determine career ladder training requirements.

PART I

SECTION A - GENERAL INFORMATION

1. Purpose. This CFETP provides information necessary for Air Force Career Field Managers (AFCFMs), MAJCOM functional managers (MFMs), commanders, education training managers, supervisors/trainer, and certifiers to plan, develop, manage, and conduct an effective career field training program. This plan outlines the training individuals require to develop and progress throughout their careers. It identifies initial skills, upgrade, qualification, advanced, and proficiency training.

1.1. Initial skills training is the AFS-specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training wings.

1.2. Upgrade training identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 5-, 7-, and 9-skill levels.

1.3. Qualification training is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills/knowledge required to do the job.

1.4. Advanced Training. A formal course which provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of the AFS.

1.5. Proficiency training is additional training, either in-residence, exportable advanced training courses, or on-the-job training, provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

2. The CFETP has several purposes:

2.1. Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. It is used to help supervisors identify training at the appropriate point in an individual's career.

2.2. Identifies task and knowledge training requirements for each skill level in the specialty and recommends education/training throughout each phase of an individual's career.

2.3. Lists training courses available in the specialty and identifies sources of training and training delivery methods.

2.4. Identifies major resource constraints that impact full implementation of the desired career field training process.

3. Uses. The plan will be used by MFMs and supervisors at all levels to ensure comprehensive and cohesive training programs are available for each individual in the specialty.

3.1. AETC training personnel will develop/revise formal resident, nonresident, field, and exportable training based on requirements established by the users and documented in Part II of the CFETP.

They will also work with the AFCFM, Air Force Civil Engineer Support Agency Training Division (HQ AFCESA/CEOF) to develop acquisition strategies for obtaining resources needed to provide the identified training.

3.2. MFMs will ensure their training programs complement CFETP mandatory initial, upgrade, and proficiency requirements and identify requirements that can be satisfied by OJT, resident training, contract training, CerTest, or exportable courses. MAJCOM-developed training to support this AFS must be identified for inclusion into the plan.

3.3. Unit Training managers and supervisors must ensure each individual completes the mandatory training requirements (including MAJCOM supplemental requirements) for the upgrade training specified in the training plan.

3.4. Each individual will complete the mandatory training requirements specified in this plan. The lists of courses in Part II will be used as a reference to support training.

4. Coordination and Approval. The AFCFM is the approval authority for the CFETP. MAJCOM representatives and AETC personnel will identify and coordinate on the career field training requirements. The AETC training manager for this specialty will initiate an annual review of this document by AETC and MFMs to ensure currency and accuracy. Using the list of courses in Part II, they will eliminate duplicate training.

SECTION B - CAREER FIELD PROGRESSION AND INFORMATION

5. Specialty Descriptions. Engineering Apprentice, Journeyman, Craftsman, and Superintendent.

5.1. Specialty Summary. Directs and performs civil engineering design, drafting, surveying, and contract surveillance to support Air Force facility construction and maintenance programs. Prepares manual and Computer Aided Design (CAD) drawings, specifications, and cost estimates. Develops, operates, and maintains Geographic Information System (GIS) modules. Utilizes surveying technology to include Global Positioning System (GPS). Evaluates potential construction sites and performs field tests on soils, asphalt, and concrete.
Related DoD Occupational Subgroup: 412.

5.2. Duties and Responsibilities for Apprentice, Journeyman, and Craftsman.

5.2.1. Develop engineering designs.

5.2.1.1. Use CAD software.

5.2.1.2. Prepare cost estimates, performance work statements, and specifications for existing and proposed facilities.

5.2.1.3. Design concrete and asphalt pavements.

5.2.1.4. Perform simple load calculations for horizontal and vertical construction.

5.2.1.5. Act as liaison between design, review, construction, and using agencies.

5.2.2. Perform drafting duties.

5.2.2.1. Interpret rough engineering sketches to produce working drawings using manual and CAD techniques.

5.2.2.2. Produce architectural, structural, civil, mechanical, and electrical drawings.

5.2.2.3. Update Base Comprehensive Plans (BCP) and maintains record drawings.

5.2.2.4. Plot and reproduce drawings.

5.2.3. Perform Geographic Information System (GIS) duties.

5.2.3.1. Create geographic coverage.

5.2.3.2. Develop database structures.

5.2.3.3. Create and populate feature codes.

5.2.3.4. Link graphical data to relational databases.

5.2.3.5. Develop query routines for end-user applications.

5.2.4. Perform surveying duties.

5.2.4.1. Conduct reconnaissance, site location, construction, and mapping surveys operating manual and electronic surveying equipment.

5.2.4.2. Collect, convert, and present field survey data for civil engineering projects.

5.2.4.3. Maintain equipment.

5.2.5. Perform contract management duties.

5.2.5.1. Manage and inspect construction and maintenance contracts.

5.2.5.2. Interpret plans, specifications, and other contract documents.

5.2.5.3. Coordinate, evaluate, monitor, and document contract activities and progress.

5.2.5.4. Prepare recommendations for contract modifications.

5.2.5.5. Review material submittals for compliance with contract specifications.

5.2.5.6. Conduct pre-final, acceptance, and post acceptance inspections.

5.2.5.7. Manage warranty and guarantee programs.

5.2.6. Perform standardized and expedient tests on soils, asphalt, and concrete.

5.2.6.1. Collect, record, and interpret test data.

5.2.6.2. Prepare reports for engineering evaluation.

5.2.7. Support contingency operations.

5.2.7.1. Develop bed-down plans to house personnel, aircraft, and associated support functions during contingency operations.

5.2.7.2. Evaluate existing airfield pavements, lighting, navigational aids, markings, and arresting systems.

5.2.7.3. Perform recovery operations to include explosive ordinance reconnaissance, airfield damage assessment, minimum operating strip selection, rapid runway repair calculations, and airfield marking procedures.

5.3. Duties and Responsibilities for Superintendents. Advises on problems associated with the career field.

5.3.1. Solves complex problems by studying layout drawings, wiring and schematic drawings, and by analyzing construction and operating characteristics.

5.3.2. Develops and establishes operation and maintenance procedures to ensure maximum efficiency.

6. Skill/Career Progression. Adequate training and timely progression from the apprentice to the superintendent skill level plays an important role in the Air Force's ability to accomplish its mission. It is essential that everyone involved in training do his or her part to plan, manage, and conduct an effective training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at appropriate points in their careers.

6.1. Apprentice. (3-Level)

6.1.1. Upon completion of initial skills training, a trainee will work with a trainer to enhance their knowledge and skills.

6.1.2. Utilize the Career Development Course (CDC), Air Force Qualification Training Packages (AFQTPs) and other exportable courses for subject and task fundamentals in the career field. Successfully complete applicable CerTests.

6.1.3. Once trained and task certified, a trainee may perform the task unsupervised.

6.1.4. After all upgrade training requirements are completed, supervisors and Unit Education and Training Managers (UETM) coordinate upgrade procedures.

NOTE: All trainees are automatically enrolled in the Community College of the Air Force (CCAF) when awarded their primary AFSC.

6.2. Journeyman. (5-Level)

6.2.1. Enter into continuation training to broaden experience base.

6.2.2. 5-Levels may be assigned job positions such as team leader and shift supervisor.

6.2.3. Will attend the Airman Leadership School (ALS) after serving 48 months in the Air Force (active duty only). In-residence or correspondence course is required for Air Reserve Component (ARC) personnel.

6.2.4. Will use CDCs and other reference material to prepare for Weighted Airman Performance Systems (WAPS) testing.

6.2.5. Should continue pursuing a CCAF degree.

6.2.6. After all upgrade training requirements are completed, supervisors and UETMs coordinate upgrade procedures.

6.3. Craftsman. (7-Level)

6.3.1. Completion of read-ahead material (RAM) and 100% core/diamond task completion and resident graduation from the 7-level resident course are basic prerequisites for award of the 7-level. Must complete, as a minimum, twelve months OJT before award of the seven level.

6.3.2. A craftsman can expect to fill various supervisory and management positions such as shift leader, mobility team chief, production supervisor, or task certifier.

6.3.3. Seven-levels should take continuation training courses or obtain added knowledge on management of resources and personnel.

6.3.4. Continue academic education through CCAF and higher degree programs is encouraged.

6.3.5. Will attend the Noncommissioned Officer Academy (NCOA) after promotion to TSgt (active duty only). Either in-residence or correspondence course is required for Air Reserve Component (ARC) personnel.

6.3.6. After all upgrade training requirements are completed, supervisors and UETMs coordinate upgrade procedures.

6.4. Superintendent. (9-Level)

6.4.1. Must be a SMSgt for award of the 9-skill level.

6.4.2. A 9-level can be expected to fill positions such as flight chief, zone superintendents, and various staff positions.

6.4.3. Should pursue increased knowledge of budget, manpower, resources, and personnel management.

6.4.4. After completion of CCAF, recommend the pursuit of additional higher education and completion of courses outside of their career AFS.

6.5. Civil Engineer Manager.

6.5.1. Must be selected for CMSgt and possess qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, and 3E691).

6.5.2. Will work in a variety of similar jobs and functional areas where general managerial and supervisory abilities can be most effectively used and challenged.

6.5.3. Resident graduation of the USAF Senior NCO Academy (SNCOA) is a prerequisite for CMSgt sew-on (active duty only). In residence or correspondence course required for ARC personnel.

7. Training Decisions. The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Engineering career field. The spectrum includes a strategy for when, where, and how to meet the training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a disjointed approach to training. The following decisions were made at the career field Utilization & Training Workshop held at Ft Leonard Wood MO in July 2000.

7.1. Initial Skills Training. The initial skills course was reviewed for content. Additions, deletions, and modifications were made to the course using Mission Ready Airman (MRA) as the guiding criteria. Wartime training tasks were identified. Additional contingency training was also identified.

7.2. Five Level Upgrade Training Requirements. Existing CDCs were reviewed and scrubbed to ensure only current material remained and new technology information was added.

7.3. Seven Level Upgrade Training Requirements. 7-level training requirements were reviewed.

7.4. Proficiency Training.

7.4.1. Any additional knowledge and skill requirements that were not taught through initial skills or upgrade training are assigned as continuation training.

7.4.2. Purpose of continuation training is to provide training exceeding minimum upgrade training requirements with emphasis on present and future duty positions.

7.4.3. MAJCOMs must develop a continuation training program that ensures individuals in the Engineering career field receive the necessary training at the appropriate point in their careers.

7.4.4. The training program will identify both mandatory and optional training requirements.

7.5. Supplemental Training. Subject Matter Experts (SME) and the Training Committee reviewed supplemental training courses for technical accuracy and identified training that was no longer required. They revalidated the remaining courses as necessary to fully support career progression in the AFS.

7.6. CerTest. Originally, the CerTest program was developed to support transition training, and meet DoD certification requirements. Now it is also the singular platform to launch AFQTP tests and supplement the evaluation of OJT.

8. Community College of the Air Force (CCAF) Academic Programs. Airmen are automatically enrolled in CCAF upon completion of basic military training. CCAF provides the opportunity to obtain an Associates in Applied Sciences Degree. In addition to its associates degree program, CCAF offers the following:

8.1. Occupational Instructor Certification. Upon completion of instructor qualification training (consisting of the Instructor Methods course and supervised practice teaching), CCAF instructors possessing an associates degree or higher may be nominated by their school commander/commandant for certification as an occupational instructor.

8.2. Trade Skill Certification. When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency-based assessment process for trade skill certification at one of four proficiency levels: Apprentice, Journeyman, Craftsman/Supervisor, or Master Craftsman/Manager. All are transcribed on the CCAF transcript.

9. The Construction Technology Associates Degree (4VEB) applies to AFSC 3E5X1.

9.1. Degree Requirements. Prior to completing an Associates Degree, the individual must be awarded a 5-level and the following requirements must be met:

Course	Semester Hours
Technical Education.....	24
Leadership, Management, and Military Studies.....	6
Physical Education.....	4
General Education.....	15
Program Elective.....	15
Technical Education; Leadership, Management, and Military Studies; or General Education	

Total.....64

9.2. Technical Education (24 Semester Hours): A minimum of 12 semester hours of Technical Core subjects/courses must be applied and the remaining semester hours applied from Technical Core/Technical Elective courses.

Technical Electives	Semester Hours
----------------------------	-----------------------

Computer Science.....	6
Construction Building Code.....	6
Construction Material Estimating.....	3
Enlisted Professional Military Education.....	12
Hazardous Materials.....	3
Industrial Safety.....	3
Properties of Materials.....	6
Quality Assurance.....	3
Soil Mechanics.....	3
Strength of Materials.....	6
Technical Writing.....	3

9.2.2. Leadership, Management, and Military Studies (6 Semester Hours): Professional military education and/or civilian management courses.

9.2.3. Physical Education (4 Semester Hours): This requirement is satisfied by completion of Basic Military Training.

9.2.4. General Education (15 Semester Hours): Applicable courses must meet the criteria for application of courses to the General Education Requirements (GER) and be in agreement with the definitions of applicable general education subjects/courses as provided in the CCAF General Catalog.

General Education	Semester Hours
--------------------------	-----------------------

Oral Communication.....	3
Speech	
Written Communication.....	3
English Composition	
Mathematics.....	3
An intermediate algebra or a college-level mathematics course that satisfies the delivering institution's mathematics requirement for graduation. If an acceptable mathematics course is applied as a technical or program elective, a natural science course may be substituted for mathematics.	
Social Science.....	3
Anthropology, Archaeology, Economics, Geography, Government History, Political Science, Psychology, Sociology	
Humanities.....	3

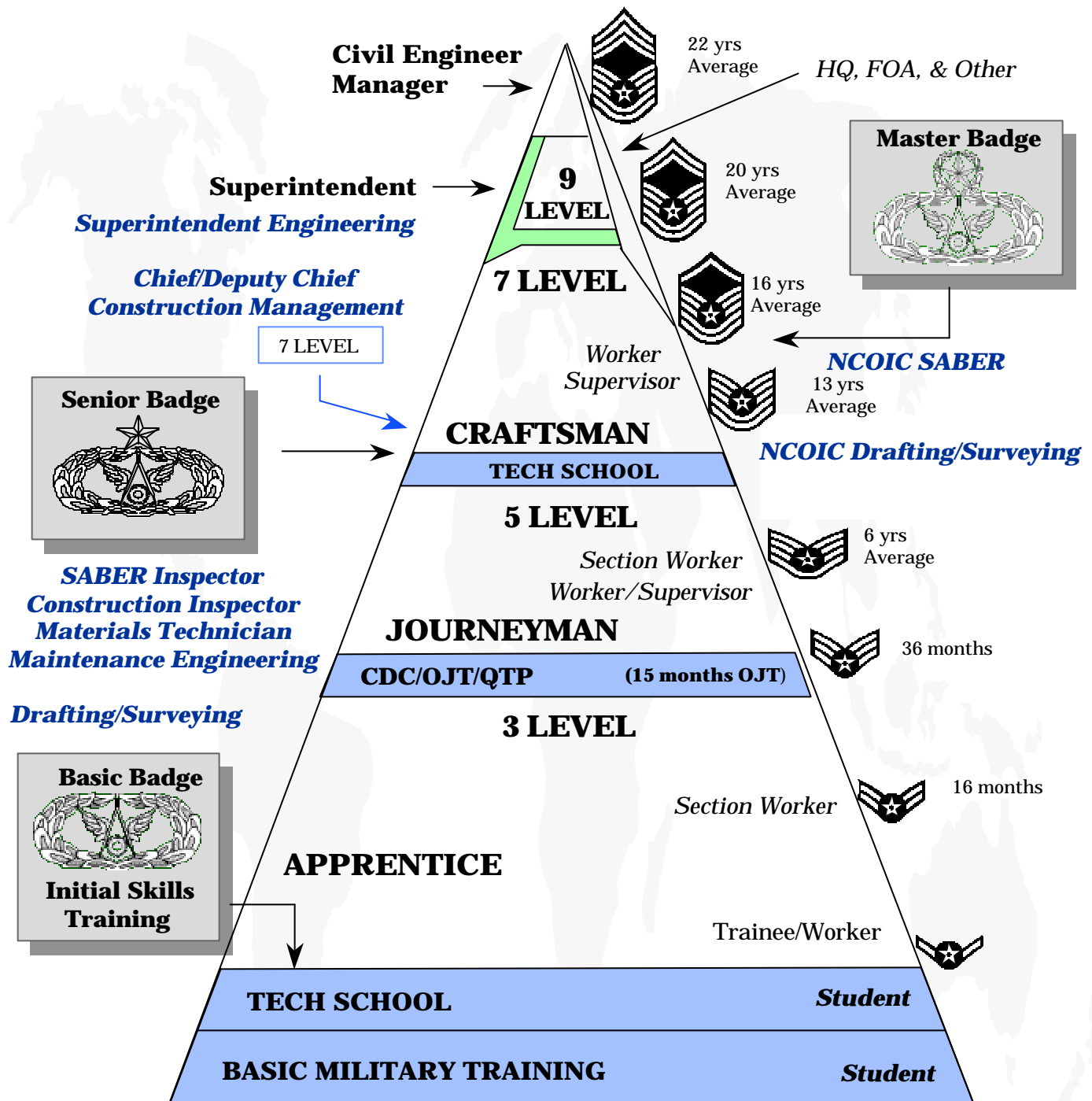
Fine Arts (criticism, appreciation, historical significance)) Foreign Language, Literature, Philosophy, and Religion

9.2.5. Program Elective (15 Semester Hours): Courses applicable to the technical education, leadership, management, and military studies (LMMS), or general education requirements. Natural science courses that meet the general education requirement (GER) application criteria. Foreign language credit earned at the Defense Language Institute or through the Defense Language Proficiency Test. Six semester hours of CCAF degree-applicable technical course credit otherwise not applicable to this program may be applied. See the CCAF General Education Catalog for details regarding the Associates of Applied Science for this specialty.

10. Additional off-duty education is a personal choice that is encouraged for all. Individuals desiring to become an Air Education and Training Command (AETC) Instructor should actively pursue an Associates Degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

11. Career Field Path. The following chart depicts this specialty's career path.

Engineering Career Pyramid



The Engineering Career Field offers many opportunities for rotation through unique duty assignments. In addition to base level positions, assignments are available with the Engineering Schoolhouse, Contingency Response Squadrons/Groups, HQ AFCEA Pavements Evaluation Team, MAJCOMs, FOAs, RED HORSE units and the Silver Flag exercise sites.

11.1. Enlisted Career Path.

Table: Enlisted Career Path				
Education and Training Requirements	GRADE REQUIREMENTS			
	Rank	Average Sew-On	Earliest Sew-On	High Year Of Tenure (HYT)
Basic Military Training school				
Apprentice Technical School (3-Skill Level)	Amn A1C	6 months 16 months		
Upgrade To Journeyman (5-Skill Level) - Complete all core and duty related tasks identified in CFETP - Minimum 15 months on-the-job training. (9 months for retrainees) - Complete appropriate CDC if/when available	SRA	3 years	28 months	10 Years
Airman Leadership School (ALS) - Must be a SrA with 48 months time in service or be a SSgt Selectee. - Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only).	<u>Trainer</u> - Trainer must be qualified and certified on tasks to be trained. - Must attend formal AF Training Course and be appointed by Commander.			
Upgrade To Craftsman (7-Skill Level) - Complete all core and duty related tasks identified in CFETP - Minimum rank of SSgt. - 12 months OJT - Complete appropriate CDC if/when available. - Attend 7-level Craftsman Course [May attend prior to completion of 12 months UGT; however, must complete read ahead material (RAM) prior to attending]	SSgt	6 years	3 years	20 Years
Retrainee: - Minimum 9 months for 5-level - Minimum 12 months for 7-level UGT	<u>Certifier</u> - SSgt with 5-skill level or civilian equivalent. - Attend formal AF Certifier Course and appointed by Commander in writing. - Be a person other than the trainer (for core and critical tasks only).			
Noncommissioned Officer Academy (NCOA) - Must be a TSgt or TSgt Selectee. - Resident graduation is a prerequisite for MSgt sew-on (Active Duty Only).	TSgt	13 years	5 years	20 Years
	MSgt	16 years	8 years	24 Years
Upgrade To Superintendent (9-Skill Level) - Minimum rank of SMSgt.	SMSgt	20 years	11 years	26 Years
Civil Engineer Manager (CEM) - USAF Senior NCO Academy (SNCOA) resident graduation is a prerequisite for CMSgt sew-on (Active Duty Only)	CMSgt	22 years	14 years	30 Years

11.2. CE Occupational Badge. The Civil Engineer badge reflects a great history and tradition. By wearing it, you will be recognized by your fellow airmen as having achieved an expected level of competence. The multitude of engineers before you established this expectation through excellent service in both peace and war. Eligibility criteria for award and wear of AF occupational badges can be found in AFI 36-2923 (Aeronautical, Duty, and Occupational Badges), on the Air Force Electronic Publications Library (AFEPL).

11.2.1. CE Badge Heraldry. The gear wheel and compass have historically been used to represent the engineering profession, in both the military and civilian sector. The gear represents the essence of engineering: applying scientific principles and technology to practical ends. To Air Force engineers, the gear symbolizes an element (representing the built environment) that meshes with other environments (weapon systems and trained personnel) to enable the Air Force to perform its mission. The compass is a precision tool historically used by engineers in designing and constructing facilities and equipment. The gear and compass together symbolize all the diverse specialties within Air Force civil engineer. Finally, the wings help to portray the fundamental linkage between the engineering and aviation components; and that the built environment is the foundation supporting Air Force mission and people.

11.2.2. Basic Badge. The basic badge is awarded upon successful completion of the apprentice course.

11.2.3. Senior Badge. The senior badge adds a star to the top of the badge. This is awarded after the member successfully completes the 7-level awarding course.

11.2.4. Master Badge. The master badge adds a wreath around the star. It's awarded to master sergeant or above with 5 years in the specialty from award of the 7-skill level.

SECTION C - SKILL LEVEL TRAINING REQUIREMENTS

12. Purpose. The various skill levels in the career field are defined in terms of tasks and knowledge requirements for the Engineering career ladder. They are stated in broad, general terms and establish the standards of performance. An all-encompassing core task list has been developed for this specialty because of the diversity of the missions supported and the equipment installed to meet mission requirements. Core tasks, (and diamond tasks as applicable), knowledge items, and skill requirements are identified in the STS. Completion of the mandatory 3-level skill awarding course, the mandatory completion of CDCs, the mandatory completion of applicable AFQTPs and CerTests, the mandatory 7-level Craftsman course, comprise the Air Force requirements.

13. Skill Level Training Requirements.

13.1. Apprentice (3-Level) Training Requirements. (3E531)

13.1.1. Specialty Qualifications.

13.1.1.1. Knowledge. Completion of the Engineering Apprentice course satisfies this mandatory requirement.

13.1.1.2. Education. For entry into this specialty, completion of high school or general educational development equivalency, with courses in algebra, geometry, trigonometry, and computer operations is mandatory. Completion of high school courses in drafting, physics, and chemistry is desirable.

13.1.1.3. Training. Completion of the Engineering Apprentice course, J5ABA3E531 000 is mandatory for award of this skill level.

13.1.1.4. Experience. N/A

13.1.1.5. Other.

13.1.1.5.1. Normal color vision as defined in AFMAN 48-123, Medical Examination and Standards.

13.1.1.5.2. Qualification to operate government vehicles according to AFI 24-301, Vehicle Operations.

13.1.2. Training Sources/Resources.

13.1.2.1. Formal training is accomplished through course J5ABA3E531 000 at Ft Leonard Wood MO.

13.1.2.2. The COL (Part II, Section B of this CFETP) identifies all the knowledge and tasks, with their respective standards.

13.1.2.3. When available, QTPs are mandatory for use during UGT/QT on all core tasks, critical tasks, and contingency/war (t) tasks.

13.1.3. Implementation. The 3-skill level is awarded upon graduating the Apprentice course.

13.2. Journeyman (5-Level) Training Requirements.)

13.2.1. Specialty Qualification. Entry into 5-level upgrade training is initiated after the individual has completed the 3-level school. All 3- level qualifications apply to 5-level requirements.

13.2.1.1. Knowledge. Knowledge is mandatory of:

13.2.1.1.1. Drafting

13.2.1.1.2. Surveying

13.2.1.1.3. Contract management

13.2.1.1.4. Materials testing

13.2.1.1.5. Contingency operations

13.2.1.2. Education. N/A

13.2.1.3. Training.

13.2.1.3.1. Completion of CDCs is mandatory.

13.2.1.3.2. Certification of all 5-level core tasks identified with a single asterisk (*) in the core task column of the STS is mandatory.

13.2.1.3.3. Completion of AFQTPs for assigned core tasks and contingency war diamond (t) tasks are mandatory.

13.2.1.3.4. Completion of CerTests for all contingency war diamond (t) tasks with a minimum of 80% is mandatory.

13.2.1.3.5. Certification of duty position requirements identified by the supervisor is mandatory.

13.2.1.3.6. Completion of local CAD and GIS courses is recommended.

13.2.1.4. Experience.

13.2.1.4.1. Qualification in and possession of 3-skill level.

13.2.1.4.2. Functions such as drafting, surveying, contract management, and contingency operations.

13.2.1.4.3. Minimum 15 months on-the-job training (9 months for re-trainees) before award of 5 skill level.

13.2.1.5. Other. N/A

13.2.2. Training Sources/Resources.

13.2.2.1. CDC 3E551, Engineering Journeyman.

13.2.2.2. The STS (Part II, Section A of the CFETP) identifies all core tasks required for qualification in the individual's duty position.

13.2.2.3. Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

13.2.3. Implementation.

13.2.3.1. Entry into formal Journeyman upgrade training is accomplished after individuals are assigned to their first duty station.

13.2.3.2. Qualification training is initiated any time individuals are assigned duties they are not qualified to perform.

13.2.3.3. AFQTPs are used concurrently to obtain necessary duty position qualifications.

13.3. Craftsman (7-Level) Training Requirements.

13.3.1. Specialty Qualification. All 5-Level qualifications apply to 7-Level requirements.

13.3.1.1. Knowledge. Knowledge is mandatory of Engineering design.

13.3.1.2. Education.

13.3.1.2.1. To assume the grade of SSgt, individuals must successfully complete Airman Leadership School (active duty only).

13.3.1.2.2. To assume the grade of MSgt, individuals must successfully complete the NCO Academy (active duty only).

13.3.1.2.3. For ANG/AFRC, completion of AFIADL courses 00001 (ALS) and 00006 D&E (NCO Academy) satisfy the requirements.

13.3.1.3. Training.

13.3.1.3.1. Completion of 7-Level read ahead material (RAM) for course J3ACR3E070 000 is mandatory prior to attending the resident course.

13.3.1.3.2. Completion of in-residence CE Management Craftsman Course J3ACR3E070 000 is mandatory.

13.3.1.3.3. Certification of all 5 and 7-skill level core tasks identified with a single asterisk (*) and double asterisk (**) in the core column of the STS is mandatory.

13.3.1.3.4. Completion of all AFQTPs for assigned core and diamond (t) tasks is mandatory.

13.3.1.3.5. Completion of CerTests for all diamond (t) tasks with a minimum of 80% is mandatory.

13.3.1.3.6. Certification of duty position requirements identified by the supervisor is mandatory.

13.3.1.3.7. Completion of the Mobile Training Team (MTT) Contract Construction Inspector course, J4AST3E571 001 is recommended.

13.3.1.3.8. Completion of in-residence courses Construction Materials Testing, J3AZP3E571 005; Engineering Design, J3AZP3E571 003, and Construction Surveying, J3AZP3E571 004 is recommended.

13.3.1.3.9. Advanced training in Geographic Information System (GIS) is recommended.

13.3.1.4. Experience.

13.3.1.4.1. Qualification in and possession of a 5-level.

13.3.1.4.2. Performing or supervising functions such as engineering design, surveying, material testing, GIS, drafting, contract management, and contingency operations.

13.3.1.4.3. Minimum 12 months on-the-job training before award of 7 skill level

13.3.1.5. Other. N/A

13.3.2. Training Sources/Resources.

13.3.2.1. CE Management Craftsman (RAM).

13.3.2.2. Course J3ACR3E070 000, CE Management Craftsman.

13.3.2.3. NCO Academy Course 00006 D&E (paper base correspondence).

13.3.2.4. Course J3AZP3E571 005, In-residence, Construction Materials Testing.

13.3.2.5. Course J3AZP3E571 003, In-residence, Engineering Design.

13.3.2.6. Course J3AZP3E571 004, In-residence, Construction Surveying

13.3.2.7. Course J4AST3E571 001, Contract Construction Inspector (MTT).

13.3.2.8. The STS (Part II, Section A of this CFETP) identifies all core tasks required for qualification in the individual's duty position.

13.3.2.9. Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

13.3.3. Implementation.

13.3.3.1. Entry into 7-level training is initiated when an individual is selected for SSgt and has fulfilled all 5-level requirements.

13.3.3.2. Qualification training is initiated any time an individual is assigned duties that they are not qualified to perform.

13.3.3.3. AFQTPs are used concurrently to obtain necessary duty position qualifications.

13.4. Superintendent (9-Level) Training Requirements.

13.4.1. Specialty Qualification. All 7-level qualifications apply to 9-level requirements.

13.4.1.1. Knowledge. Knowledge is mandatory of:

13.4.1.1.1. Engineering principles, materials, and specification writing.

13.4.1.1.2. Air Force contracting procedures.

13.4.1.2. Education. ANG/AFRC must complete AFIADL course 00005 (computer based CD ROM) to satisfy the Senior NCO Academy requirement.

13.4.1.3. Training. Completion of duty position training requirements.

13.4.1.4. Experience.

13.4.1.4.1. Qualification in and possession of 7-level is mandatory.

13.4.1.4.2. Directing functions such as engineering design, surveying, material testing, GIS, drafting, contract management, and contingency operations.

13.4.1.5. Other.

13.4.2. Training Sources/Resources.

13.4.2.1. In-residence SNCO Academy located at Maxwell AFB - Gunter Annex AL.

13.4.2.2. SNCO Academy Course 00005 (exportable computer based CD ROM).

13.4.3. Implementation.

13.4.3.1. Entry into 9-level training is initiated when an individual is selected for SMSgt and is fully qualified 7-level.

13.4.3.2. QT is initiated any time an individual is assigned duties they are not qualified to perform.

13.5. Civil Engineer Manager.

13.5.1. Specialty Qualification.

13.5.1.1. Knowledge. Knowledge is mandatory of:

13.5.1.1.1. Managing and directing personnel resource activities.

13.5.1.1.2. Interpreting and enforcing policy and applicable directives.

13.5.1.1.3. Establishing control procedures to meet work goals and standards.

13.5.1.1.4. Recommending or initiating actions to improve operational efficiency.

13.5.1.1.5. Planning and programming work commitments and schedules.

13.5.1.1.6. Developing plans regarding facilities, supplies, and equipment procurement and maintenance.

13.5.1.2. Education. Must be a resident graduate of SNCOA (active duty only)

13.5.1.3. Training. N/A

13.5.1.4. Experience.

13.5.1.4.1. Possess qualifications in feeder specialty (3E591) prior to award of Civil Engineer Manager code 3E000.

13.5.1.4.2. Managerial ability to plan, direct, coordinate, implement, and control a wide range of work activity.

13.5.1.5. Other. N/A

13.5.2. Training Sources/Resources. N/A

13.5.3. Implementation. Entry into Civil Engineer Manager code 3E000 is initiated when an individual is selected for CMSgt and possesses qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, and 3E691).

SECTION D - RESOURCE CONSTRAINTS

14. Purpose. This section identifies known resource constraints, which preclude optimal/desired training from being developed or conducted. Narrative explanations of each resource constraint and an impact statement describing what effect each constraint has on training are included. Also included in this section are actions required, office of primary responsibility, and target completion dates. HQ AFCEA/CEOF and HQ AETC training experts will review and update resource constraints annually.

15. Apprentice (3-Level) Training. J5ABA3E531 000, Engineering Apprentice.

15.1. Constraint. Course implementation with slashes (column 4A1). Course cannot be implemented until completion and approval of Plan of Instruction (POI).

15.1.1. Impact. Required training will not be ready for implementation upon publication of this CFETP.

15.1.2. Resources Required. None, other than time for course development. Manpower resources are available to complete required course revisions by the specified target completion date.

15.1.3. Action Required. Complete revision of the 3-level course to meet all training requirements and proficiency codes identified in this CFETP.

15.2. OPR/Target Completion Date. 366 TRS/Det 7 will implement revised training with class beginning 18 Mar 2002 and graduating 13 Jun 2002.

16. Journeyman (5-Level) Training. AFQTP development for all core tasks.

16.1. Constraints. Time for development of AFQTPs to meet added and changed requirements in this CFETP.

16.1.1. Impact. Required AFQTPs will not be ready for UGT or QT upon publication of this CFETP.

16.1.2. Resources Required. Manpower (SMEs) from MAJCOMs to complete the development of paper-based AFQTPs.

16.1.3. Action Required. Complete all AFQTPs to meet the training requirements identified in this CFETP.

16.2. OPR/Target Completion Date. HQ AFCEA/CEOF will hold workshops to develop required AFQTPs. ECD: Sep 2002.

17. Craftsman (7-Level) Training. AFQTPs.

17.1. Constraints. Required lead-time for development of AFQTPs to meet added and changed requirements in this CFETP.

17.1.1. Impact. Required AFQTPs will not be ready for UGT or QT upon publication of this CFETP.

17.1.2. Resources Required. Manpower (SMEs) from MAJCOMs to complete the development of paper-based AFQTPs.

17.1.3. Action Required. Complete all AFQTPs to meet the training requirements identified in this CFETP.

17.2. OPR/Target Completion Date. HQ AFCESA/CEOF will hold workshops to develop required QTPs. ECD: Sep 2002.

18. Superintendent (9-Level) Training. No Constraints.

SECTION E - TRANSITIONAL TRAINING GUIDE

“There is currently no transition training requirements. This area is reserved.”

PART II

SECTION A - SPECIALTY TRAINING STANDARD

1. Implementation. This STS will be used to identify technical training provided by AETC for the 3-level Engineering Apprentice course with class beginning 18 Mar 2002 and graduating 13 Jun 2002 and the 7-level Civil Engineer Management Craftsman course with class beginning 23 Jul 01 and graduating 03 Aug 01.

2. Purpose. As prescribed in AFI 36-2201, this STS:

2.1. Lists in Column 1 (*Tasks, Knowledge, and Technical Reference*) the most common tasks, knowledge, and technical references (TR) necessary for airmen to perform duties in the 3-, 5-, and 7-skill level.

2.2. Column 2 (*Core Tasks*) identifies core tasks (specialty-wide training requirements) by an asterisk (*) for 5- skill level or a double asterisk (**) for 7-skill level only. ***As a minimum, trainees must complete all core and critical tasks for skill level upgrade.***

2.2.1 Tasks identified by a diamond (♦) in column 2 are considered contingency/war tasks for both the 5- and 7-skill level and are extremely important to the career field. Equipment shortfalls at most locations however, have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training.

2.3. Provides **certification for OJT**. Columns 3A, B, C, D, and E are used to record completion of tasks and knowledge training requirements. If available, use automated training management systems to document technician qualifications. **Task certification of core and critical tasks** require a training completion date and initials of the trainee, trainer, and certifier. All non-core tasks require training completion date and initials of the trainee and trainer only.

2.4. Shows **formal training and correspondence course** requirements. Columns 4A, B, and C show the proficiency to be demonstrated on the job by the graduate as a result of training on the task/knowledge and the career knowledge provided by the initial skills training course, correspondence course, and read-ahead material. See CADRE/AFSC/CDC listing maintained by the unit-training manager for current CDC listings.

2.5. Identifies **qualitative requirements**. Attachment 1 contains the *Proficiency Code Key* used to indicate the level of training and knowledge provided by resident training and career development courses.

2.6. Becomes a **job qualification standard (JQS)** for on-the-job training when placed in AF Form 623, Individual Training Record, and used according to AFI 36-2201. When used as a JQS, the following requirements apply:

2.6.1. Documentation. Document and certify completion of training.

2.6.1.1. Identify **current duty position requirements** by circling the subparagraph number or letter next to the task statement. Additionally, all core and diamond (♦) identified tasks should

be circled. Document task completion by annotating columns 3A, 3B, 3C, and 3D. *Note:* All entries shall be made in pencil.

2.6.1.2. Enter the start date of the AFQTP on the documentation record. Once completed enter the completion date. When **hands-on** training is started and/or completed anotate the STS accordingly.

2.6.1.3. Transcribing from old document to CFETP. Use the new STS to identify and certify all current and past task qualifications.

2.6.1.3.1. For tasks previously certified and still required in the current duty position:

2.6.1.3.1.1 For core and critical tasks, the trainer and certifier evaluates airman's current qualifications and validates airman's ability to complete the task. The certifier and trainee then enter their initials and new certified date.

2.6.1.3.1.2 For non-core duty position tasks, the trainer evaluates the airman's current qualifications and validates the airman's ability to complete the task. The trainer and trainee then enters their initials in columns 3D and 3C respectively and a new training completion date is entered in column 3B.

2.6.1.3.2. To transcribe previous certifications for tasks not required in the current duty position, carry forward only the previous completion dates (not the initials of another person). If and when these tasks become a duty position requirement, recertify with current date and supervisor's and trainee's initials.

2.6.1.4. Documenting Career Knowledge. When a CDC is not available, the supervisor identifies STS training references that the trainee requires for career knowledge and ensures, as a minimum, that trainees cover all mandatory items specified in AFMAN 36-2108, Utilization and Classification of Air Force Military Personnel. For two-time CDC exam failures, supervisors identify all STS items corresponding to the areas covered by the CDC. The trainee completes a study of STS references, undergoes evaluation by the task certifier, and receives certification on the STS. *NOTE:* Career knowledge must be documented prior to submitting a CDC waiver.

2.6.1.5. Decertification and Recertification. When an airman is found to be unqualified on a task, the supervisor shall erase previous certification and enter airman into qualification training. Appropriate remarks are entered on the AF Form 623a, On-The-Job Training Record Continuation Sheet, as to the reason for decertification. The individual is recertified using the normal certification process.

2.6.2. Training Standard. Tasks are trained and certified to the "go" level. "Go" means the individual can perform the task without assistance and meets the local requirements for accuracy, timeliness, and correct use of procedures. This equates to a "3c" in the proficiency code key. AFQTPs, when available, shall be used to identify Air Force standardized procedures. Local requirements for accuracy, timeliness and use of procedures shall be applied accordingly.

2.7. The STS is a guide for **development of promotion tests** used in the Weighted Airman Promotion System (WAPS). Specialty Knowledge Tests (SKTs) are developed at the USAF

Occupational Measurement Squadron by senior NCOs with extensive practical experience in their career fields. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the WAPS catalog. Individual responsibilities are in chapter 14 of AFI 36-2606, United States Air Force Reenlistment, Retention, and NCO Status Programs. WAPS is not applicable to the Air National Guard or Air Reserve Forces.

3. Recommendations. Comments and recommendations are invited concerning quality of training AETC graduates receive. Reference this STS regarding changes and address your correspondence to 782 TRG/TTS, 620 9th Avenue, Suite 3, Sheppard AFB TX 76311-2368 or E-mail 782csil@sheppard.af.mil. A 782d customer service information line (CSIL) has been installed for the supervisor's convenience to identify graduates who may have received over or under training on tasks/knowledge items listed in this STS. For a quick response to problems, call the CSIL at DSN 736-2574 any time (day or night).

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

EARNEST O. ROBBINS II, Maj Gen USAF
The Civil Engineer
DCS/Installations and Logistics

4 Attachments

1. Qualitative Requirements
2. 3, 5 and 7-Level Career Field Training Requirements
3. General Contingency Training Requirements
4. AFQTP Documentation Record

THIS BLOCK IS FOR IDENTIFICATION PURPOSES ONLY		
NAME OF TRAINEE		
PRINTED NAME (Last, First, Middle Initial)	INITIALS (Written)	SSN
PRINTED NAME OF CERTIFYING OFFICIAL AND WRITTEN INITIALS		
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	

QUALITATIVE REQUIREMENTS

PROFICIENCY CODE KEY		
	SCALE VALUE	DEFINITION: The individual
TASK PERFORMANCE LEVELS	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
*TASK KNOWLEDGE LEVELS	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)
**SUBJECT KNOWLEDGE LEVELS	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)
EXPLANATIONS		
<p>* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples: b and 1b)</p> <p>** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.</p> <p>- This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC.</p> <p>X This mark is used alone in course columns to show that training is required but not given due to limitations in resources.</p>		

Note 1: Underlined training references are commercial publications or other publications essential for enlisted specialty training and mission accomplishment.

Note 2: Task knowledge gained at Basic Military Training (BMT) will not be repeated during resident training.

Note 3: Prior to attending Civil Engineer Management Craftsman resident course, all personnel must successfully complete the 7-level Read-ahead Material (RAM) for J3ACR3E070 000. Personnel must present RAM test results upon arrival.

Note 4: QTPs may be provided through multiple delivery systems (paper-based, CD-ROM, or video). Completion is required for upgrade or qualification. Access AFCESA's homepage (www.afcesa.af.mil) for the most current AFQTPs.

Note 5: Annotate AFQTP completion on the AFQTP Documentation Record (attachment 4). The AFQTP Documentation Record is used to track knowledge training only. Annotate the STS only when hands-on training is started and completed.

Note 6: In addition to completing the AFQTP Documentation Record, for ease of reference, you may place an "X" in column "4B(2)-QTP" to denote AFQTP completion.

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
1. CE ORGANIZATION AND CAREER FIELD STRUCTURE TR: AFDD 2-4.2; AFIs 10-209, 10-210, 10-211, 32-1022, 36-2101, 38-101, 51-903; AFMAN 36-2108; AFPAM 32-1004 v.1-6, 32-1005												
1.1. Base Civil Engineer (BCE) structure							A		B			
1.2. Progression in career ladder							A		B			
1.3. Duties and responsibilities												
1.3.1. Peacetime							A					
1.3.2. Contingency							A					
1.4. Functions of:												
1.4.1. BCE							A		B		B	
1.4.2. Prime BEEF							A		B		B	
1.4.3. RED HORSE							A		B		B	
1.4.4. HQ ANG/AFRC							A		B		B	
1.5. Resources												
1.5.1. Assess manpower requirements											b	3c
1.5.2. Identify budget requirements											b	3c
1.5.3. Determine equipment requirements											b	3c
1.5.4. Use Allowance Standards (AS)											b	3c
1.5.5. Research, Development, and Acquisition (RD&A) TR: DoDD 5000.1												
1.5.5.1. Process												B
1.5.5.2. Unit responsibilities												B
1.5.5.3. Major command responsibilities												B
1.5.6. Assess vehicle requirements											b	1b
1.5.7. Requesting contract services											b	2c
1.5.8. Requesting Simplified Acquisition of Base Engineering Requirements (SABER) contract											B	C
2. SPECIFIC OPSEC VULNERABILITIES TR: AFI 10-1101							A					
3. PRACTICE COMPUTER SECURITY TR: AFSSI 5102							A				A	1b

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
4. SUPERVISION TR: AFMAN 36-2108; AFIs 36-2201; DoDD 5500.7												
4.1. Orient new personnel											b	
4.2. Assign personnel to work crew											b	
4.3. Coordinate work assignments											b	
4.4. Schedule work assignments and priorities											b	
4.5. Establish:												
4.5.1. Work methods											b	
4.5.2. Controls											b	
4.5.3. Performance standards											b	
4.6. Evaluate work performance of subordinate personnel											b	
4.7. Resolve technical problems for subordinate personnel											b	
4.8. Direct projects											b	2b
5. TRAINING TR: AFIs 36-2101, 36-2201; AFMAN 36-2108; AFPAM 36-2247												
5.1. Evaluate personnel to determine need for training									b		b	3c
5.2. Enlisted specialty training supervision												
5.2.1. Prepare job qualification standards											b	3c
5.2.2. Conduct training											b	3c
5.2.3. Counsel trainees on their progress											b	3c
5.2.4. Monitor training effectiveness of:												
5.2.4.1. Career knowledge									a		b	3c
5.2.4.2. Job proficiency upgrade									a		b	3c
5.2.4.3. Qualification									a		b	3c
5.3. Maintain training records									a		b	3c
5.4. Evaluate training programs effectiveness											b	3c
5.5. Recommend people for training											a	b
5.6. AETC training management system (Training Allocation)									A		A	B
5.7. Managing Certification and Testing (CerTest)							A		B			B
5.8. National/DoD Certification requirements									A		A	B
5.9. AFQTP Requirements											B	
6. ENVIRONMENTAL AWARENESS AND COMPLIANCE TR: AFIs 32-4002, 32-7045, 32-7061; Chemicals in Your Community (EPA 550-K-93-003); EO 12856												
6.1. Environmental Compliance Assessment Management Program (ECAMP)							A		B		B	

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
6.2. National Environmental Policy Act (NEPA)							A		B		B	
6.3. Environmental Impact Analysis Process (EIAP)							A		B		B	
6.4. Emergency Planning and Community Right to Know Act (EPCRA)							A		B		B	
7. CE MANAGEMENT TR: AFI 32-1031, 32-1022; AFPAMs 32-1004 v.1-6, 32-1005, 32-1098; AFMAN 23-110												
7.1. Customer relationships							A		B		B	
7.2. Work identification and authorization									A		B	
7.3. Plan work requirements									a		b	2b
7.4. Plan logistics support (CEMAS, BOM)									a		b	2b
7.5. IMPAC Program											A	B
7.6. Maintain recurring work program									a		b	2b
7.7. Scheduling/time accounting									a		b	2b
7.8. Warranty and Guarantee Program									A		B	
7.9. Property Accountability									B			B
7.10. Base Comprehensive Plan											A	
7.11. Legal limits									A			
7.12. Mark "As Built " Drawings											b	2b
7.13. Reimbursements procedures									A		B	
7.14. CE Specific Automated Systems (Computer) Capability												
7.14.1. Perform inputs									a		b	1a
7.14.2. Maintain files									a		b	1a
7.14.3. Develop automated reports									a		b	1a
7.14.4. Extract automated reports									a		b	1a
7.14.5. Perform automated data analysis									a		b	1a
7.15. Host Tenant and Interservice Agreements											A	
7.16. Civil Engineer Civilian Management											B	C
8. COMMUNICATIONS TR: AFI 33-106; AFJMAN 24-306												
8.1. Use radios							b					
8.2. Use hand signals							b					
8.3. Identify airdrome signals							b					
9. AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM TR: AFPDs 91-2, 91-3; AFI 91-302												
9.1. Supervisory responsibilities									B			
9.2. Hazardous materials waste handling							A		B			
9.3. Lead-based paint (LBP) hazard TR: 29-CFR 1926.62; Working With Lead-based Paint: Facts and Information Applicable to Air Force Facilities							B					
9.4. Fire extinguisher training							A					

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
10. PUBLICATIONS TR: AFI 33-360 Vol 1 and 2; AFPAMs 32-1004 v1-6; 32-1005												
10.1. Military							A		B			
10.2. Commerical							A		B			
10.3. Engineering Technical Letters (ETL)							A		B			
11. AFS SPECIFIC TRAINING TR: AFPDs 91-2, 91-3; AFI 91-302												
11.1. AFOSH training/standards for AFS							A		B			
11.2. Asbestos hazard							A		B			
11.3. Initial Federal Hazard Communication Training Program (FHCTP) TR: DoD 6050.5-G-1; OSHA 29 CFR1910.1200; AFI 91-302							A					
12. AFS SPECIFIC PUBLICATIONS TR: TO's 0-1-01, 0-1-02, 00-2-1, 00-5-1, 00-5-2, 00-20-7												
12.1. Use indexes to locate numbers and titles of manuals, regulations, technical orders, and forms							1a		B			
12.2. Standard publications									B			
12.3. Technical orders									B			
12.4. National Electrical Code (NFPA 70)									B			
12.5. National Electrical Safety Code									B			
12.6. Use technical publications to perform maintenance, operations, and troubleshooting							A		B			
12.7. Architectural Graphic Standards							A		B			
13. SURVEYING Surveying with Construction Applications, Surveying Theory and Practice TR: EM 1110-1-1002; EM 1110-1-1005; FM 3-34.331; FM 5-233												
13.1. Manual Surveying; perform associated tasks using manual surveying equipment, such as; transits, theodolite, auto levels, steel tapes, and leveling rods												
13.1.1. Setup and tear down equipment							2b		B			
13.1.2. Complete and maintain survey field notes							2b		B			

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
13.1.3. Establish horizontal control	*						2b		B			
13.1.4. Measure and compute horizontal angles	*						2b		B			
13.1.5. Measure and compute horizontal distances	*						2b		B			
13.1.6. Perform traverse computations and adjustments							2b		B			
13.1.7. Establish vertical control	*						2b		B			
13.1.8. Perform level loop computations and adjustments							2b		b			
13.1.9. Perform profile and cross section leveling									b			
13.1.10. Compute and layout horizontal curve data							2b		B			
13.1.11. Compute and layout vertical curve data							2b		B			
13.1.12. Compute cross section end areas									b			
13.1.13. Compute earthwork volumes									b			
13.1.14. Set route centerline and grade stakes							b		B			
13.1.15. Set slope stakes							2b		B			
13.1.16. Set batter boards							b		B			
13.1.17. Perform topographic survey	*						b		B			
13.1.18. Produce topographic map	*						2b		B			
13.1.19. Perform field tests on a transit / theodolite							2b		B			
13.1.20. Perform field adjustments on transit / theodolite									b			
13.1.21. Perform field tests on an auto level							2b		B			
13.1.22. Perform field adjustments on an auto level									b			
13.2. Automated surveying; perform associated tasks using electronic total stations and associated equipment, such as an electronic data collector												
13.2.1. Setup and tear down equipment							2b		B			
13.2.2. Setup and utilize data collection equipment							2b		B			
13.2.3. Establish horizontal and vertical control by performing a traverse survey Ref: QTP, Module 13, Surveying	◆						2b		B			
13.2.4. Download electronic survey data to a civil software package							2b		B			
13.2.5. Adjust electronic survey data using a civil software package							2b		B			
13.2.6. Perform and compute construction layout requirements							2b		B			
13.2.7. Design and plot horizontal alignment using civil software package							2b		B			
13.2.8. Design and plot vertical alignment using civil software package							2b		B			
13.2.9. Compute and plot cross sectional end areas using civil software package							2b		B			

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
13.2.10. Compute and plot earthwork volumes using civil software package							2b		B			
13.2.11. Set centerline, grade, and slope stakes using civil software package							2b		B			
13.2.12. Perform a topographic survey Ref: QTP, Module 13, Surveying	◆						2b		B			
13.2.13. Manipulate topographic data using a civil software package							2b		B			
13.3. Global Positioning System (GPS) surveying; perform tasks using GPS and associated equipment TR: EM 1110-1-1003												
13.3.1. Setup and tear down Global Positioning System (GPS) survey equipment							2b		B			
13.3.2. Setup and utilize data collection equipment (GPS)							2b		B			
13.3.3. Perform static survey (GPS)							2b		B			
13.3.4. Perform kinematic survey (GPS)							2b		B			
13.3.5. Perform Real-Time Kinematic (RTK) survey							2b		B			
13.3.6. Download electronic data to post-processing software							2b		B			
13.3.7. Adjust electronic data using post-processing software							2b		B			
13.3.8. Utilize GPS equipment to layout routes, structures, and utilities							2b		B			
13.3.9. Utilize Precision Lightweight GPS Receiver (PLGR) for expedient survey methods									B			
14. CONSTRUCTION MATERIALS TESTS TR: AFJMAN 32-1034; FM 5-472; ASTM Manuals 14, 15, 19												
14.1. Perform soils exploration and tests									b			
14.2. Classify soils									b			
14.3. Test bituminous materials									b			
14.4. Design of bituminous mixes									B			
14.5. Test concrete materials									b			
14.6. Design of concrete mixes									B			
14.7. Prepare material test reports									b			
15. DRAFTING, MANUAL TR: Architectural and Graphic Standards												
15.1. Perform fundamental drafting practices	*						2b		B			
15.2. Identify / select basic American National Standards Institute (ANSI) symbols	*						2b		B			
15.3. Hand letter drawings							2b		B			
15.4. Review completed project drawings							2b		B			

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A		B		C	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
15.5. Maintain drawing files							a		b			
15.6. Drawing reproduction							A		B			
15.7. Maintain engineering reproduction machine									B			
15.8. Update as-built drawings							2b		B			
15.9. Interpret engineering sketches							2b		B			
16. COMPUTER AIDED DESIGN (CAD) /GEOGRAPHIC INFORMATION SYSTEM (GIS) TR: Manufacturers operators manuals												
16.1. CAD fundamentals												
16.1.1. Setup drawings	*						2b		B			
16.1.2. Utilize basic drawing commands	*						2b		B			
16.1.3. Utilize display commands	*						2b		B			
16.1.4. Create and utilize symbols	*						2b		B			
16.1.5. Utilize advanced commands	*						2b		B			
16.1.6. Utilize reference files	*						2b		B			
16.1.7. Apply scaling factors	*						2b		B			
16.1.8. Perform printing and plotting	*						2b		B			
16.2. Scan drawings							2b		B			
16.3. Draw architectural plans							2b		B			
16.4. Draw structural plans							2b		B			
16.5. Draw civil plans							2b		B			
16.6. Draw mechanical plans							2b		B			
16.7. Draw electrical plans							2b		B			
16.8. CAD management												
16.8.1. Create drawing file directories							a		B			
16.8.2. Utilize Tri-service CAD standards							a		B			
16.8.3. Customize CAD platform									B			
16.9. Update as-built and record drawings							2b		B			
16.10. Geographic Information System (GIS)												
16.10.1. GIS concepts							A		B			
16.10.2. Tri-Service Spatial Data Standards (TSSDS)							A		B			
16.10.3. Develop database structures									b			
16.10.4. Populate feature codes									b			
16.10.5. Develop query routines									b			
16.10.6. Develop end-user applications									b			
17. BASE COMPREHENSIVE PLAN (BCP) PROGRAM TR: AFIs 32-1024, 32-7062; AFMAN 91-201; AFPAM 32-11004v2, 32-1005												
17.1. Plan overview							A		B			

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
17.2. General planning criteria									B			
17.3. Airfield planning criteria	*								B			
17.4. Explosive safety criteria	*								B			
17.5. Capital improvements planning criteria									B			
18. CIVIL ENGINEERING DESIGN TR: AFI 32-1023												
18.1. Architectural plans									B			
18.2. Structural plans									B			
18.3. Mechanical plans									B			
18.4. Electrical plans									B			
18.5. Civil plans									B			
18.6. Prepare materials take-offs	*								b			
18.7. Estimate cost elements such as: materials, equipment, and labor TR: Means Building Construction Cost Data	*								b			
18.8. Develop work statements TR: FAR	*								b			
18.9. Prepare project specifications using Construction Guide Specifications; Corps of Engineers Guide Specifications TR: FAR									b			
18.10. Review project specifications												
18.10.1. Identify material and equipment									b			
18.10.2. Identify method of installation and construction									b			
18.11. Prepare programming documents									b			
19. CONTRACT MANAGEMENT TR: DoDD 5500.7; AFI 32-1023; AFPAM 32-1001; 32-1005; FAR												
19.1. Standards of conduct							A		B			
19.2. Enforce general provisions of contracts	*								b			
19.3. Conduct constructability review	*								b			
19.4. Document construction activities	*								b			
19.5. Evaluate construction contract progress schedule	*								b			
19.6. Evaluate progress reports	*								b			
19.7. Evaluate materials submittals and test reports	*								b			
19.8. Pre-performance conference									B			
19.9. Construction permits									B			
19.10. Surveillance of Military Construction (MILCON) program projects									B			

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
19.11. Quality Assurance Evaluator (QAE) duties TR: AFI 63-124; AFPAM 32-1004v2; 32-1006												
19.11.1. Monitor service contracts									b			
19.11.2. Prepare Performance Work Statements (PWS)									b			
19.11.3. Prepare surveillance plans									b			
19.11.4. Prepare surveillance documents									b			
19.12. Simplified Acquisition Base Engineer Requirements (SABER) project management									B			
19.13. Project close-out procedures									B			
19.14. Warranty and guarantee program									B			
20. AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES TR: AFIs 10-210; 10- 211; 32-1026; TO's 35E-5-6-1, 35E4-132-1, 35E4-94-1; Army TMs 10-8340-207-14, 10-450-200-12; WMP-1, Annex S; AFPAM 10-219, Vol. 1,2, 3, 4, & 5												
20.1. Pre-attack preparations							B		B			
20.2. Airfield assessment												
20.2.1. Perform initial airfield assessment	*						2b		B			
20.2.2. Perform airfield damage assessment	*						2b		B			
20.3. Perform Explosive Ordnance Reconnaissance (EOR)	*						b		B			
20.4. Survival Recovery Center (SRC) operations							B		B			
20.5. Damage Control Center (DCC) operations							B		B			
20.6. Perform Minimum Operating Strip (MOS) selection procedures and considerations	*						2b		B			
20.7. Plot airfield damage	*						2b		B			
20.8. Perform Crater Profile Measurement (CPM) operations Ref: QTP, CD-Rom, Crater Profile Measurement	◆						2b		B			
20.9. Compute Repair Quality Criteria (RQC) for RRR TR: AFI 32-1042; AFPAM 10-220 v4; TO 35E2-4-1							b		B			
20.10. Layout Minimum Airfield Operating Strip Marking System (MAOSMS) TR: AFPAM 10-220 v4; TO 35E2-6-1 Ref: QTP, CD-Rom, Minimum Operating Strip Layout	◆						2b		B			

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
20.11. Mobile Aircraft Arresting System (MAAS) procedures TR: AFPAM 10-219, Vol 3,4 & 5; TO's 35E8-2-5-4, 35E8-2-10-3, 35E8-2-10-1S-1, 35E8-2-1-101, 35E8-2-10-1, AFI 13-217; FMs 5-430-00-2 35E8-2-11-1, 35E8-2-11-2												
20.11.1. Align MAAS Ref: QTP, CD-Rom, MAAS	◆						a		b			
20.11.2. Align MAAS with Lightweight Fairlead Beams Ref: QTP, CD-Rom, Lightweight Fairlead Beam	◆								b			
20.11.3. Align MAAS with standard beams with deadman anchoring system Ref: QTP, CD-Rom, MAAS	◆								b			
20.12. Perform facility and infrastructure damage assessment							b		B			
20.13. Combat air base planning and purpose TR: AFPAM 10-219, Vol 5; AFI 13-217; AFM 32-4004 ; AS-158												
20.13.1. Wartime planning factors							A		B			
20.13.2. Standards of construction							A		B			
20.13.3. Identify Bare Base assets	*						a		b			
20.13.4. Combat air base planning principles							A		B			
20.13.5. Facility and utility option development							A		B			
20.13.6. Air base operability assessment elements							A		B			
20.14. Expedient beddown methods TR: AFPAM 10-219, Vol 5; AFDD 36												
20.14.1. Apply Bare Base planning criteria	*						2b		B			
20.14.2. Perform site selection	*						2b		B			
20.14.3. Establish dispersed layout							b		B			
20.14.4. Establish non-dispersed layout	*						2b		B			
20.14.5. Shelter orientation							A		B			
20.14.6. Aircraft revetment citing TR: AFPAM 10-220, Vol 2; AFMAN 32-1071; AFDD 2-4.2; AFM 32-4005							A		B			
20.15. Perform soils exploration under field conditions TR: AFM 32-4004; AFIs 13-217, 3-101, Vol 1									b			
20.16. Classify soils under field conditions									b			
20.17. Determine field California Bearing Ratio (CBR) using Dynamic Cone Penetrometer (DCP)							1a		b			
20.18. Force protection engineering considerations and measures	*								B			
20.19. Aircraft parking planning									B			
20.20. High Mobility Multi-Wheeled Vehicle (HMMWV)									B			

1. Task Knowledge and Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used to Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) QTP	(1) RAM	(2) Course
20.22. Decontamination apparatus									B			

GENERAL CONTINGENCY

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
21. GENERAL CONTINGENCY RESPONSIBILITIES TR: AFIs 10-201;10-207; 10-210, 10-211, 32-1026; 32-7062; AFH 32-4011, Vol 1; T.O.s 35E-5-6-1, 35E4-132-1, 35E4-94-1; War Mobilization Plan (WMP)-1, Annex S; AFPAM 10-219, Vol 1- 10												
21.1. Prime BEEF (PB) Orientation TR: AFDD 42; AFIs 10-403; 51-401; AFD 51-4; AFCESA/CEX - Prime BEEF Equipment Supply List (ESL)												
21.1.1. The Prime BEEF (PB) Program												
21.1.2. The Prime BEEF organization												
21.1.3. Code of Conduct												
21.1.4. The Law of Armed Conflict												
21.1.5. The Prime BEEF equipment requirements												
21.1.5.1. Consolidated tool kits (CTK)												
21.1.5.2. Equipment Issues												
21.1.5.3. Equipment Storage												
21.1.5.4. Mobility bags												
21.1.5.5. Weapons TR: AFIs 10-210, 31-101, 31-207; 36-2226, 91-202; AFPAM 10-219, Vol 8												
21.1.5.5.1. Issue												
21.1.5.5.2. Control												
21.1.5.5.3. Courier												
21.1.5.6. Team kits												
21.1.5.7. Body armor												
21.1.5.8. Tactical communication system												
21.1.6. Individual responsibilities												
21.1.7. Accountability												
21.1.8. Marshal Equipment and Personal												
21.2. First Aid Techniques TR: AFIs 36-2238, 32-4001, 48-110; AFH 36-2218, Vol 2; +A37												
21.2.1. Individual's responsibilities for administering first aid												

GENERAL CONTINGENCY

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
21.2.2. Self aid and buddy care concept												
21.2.3. Basic lifesaving steps												
21.2.4. Move and transport injured personnel												
21.3. Field Sanitation & Hygiene Measures TR: AFIs 48-110, 10-210; AFDD 35; ARMY FM 21-10												
21.3.1. Personal hygiene measures												
21.3.2. Countermeasures												
21.3.2.1. Disease and pestilence												
21.3.2.2. Communicable diseases												
21.3.3. Sanitation requirements												
21.3.3.1. Field												
21.3.3.2. Kitchen & Mess												
21.4. Self Protection from Extreme Weather TR: A77; AFPAM 10-219, Vol 5; Army FM 21-76												
21.4.1. Hot weather survival techniques												
21.4.2. Cold weather survival methods												
21.5. Force Protection TR: Joint Pub 1-02; AFH 32-4014, Vol 4; AFH 10-222, Vol 3; AFPAM 10-219 Vol 2; DoD 0-2000.12-H; Joint Services Guide 5260												
21.5.1. Personal / Work Party Security TR: AFIs 36-2226, 36-2209, A88, 31-301 10-403, 10-404, 31-207, 10-215; AFPAM 10-219, Vol 3 ; Army FMs 21-75; 7-8												
21.5.1.1. Combat skills												
21.5.1.2. Defensive tactics												
21.5.1.2.1. Cover and concealment												
21.5.1.2.2. Individual movement												
21.5.1.2.3. Weapons fire control												
21.5.1.2.4. Communications												

GENERAL CONTINGENCY

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
21.5.1.2.5. Field fortifications												
21.5.1.2.6. Guard placement/perimeter defense												
21.5.1.2.7. Recognition code system												
21.5.2. Air Base Defense (ABD) Interface TR: AFIs 31-301, 31-702												
21.5.2.1. Ground threats												
21.5.2.2. ABD concept												
21.5.2.3. Defensive tactics												
21.5.2.4. Force movement												
21.5.2.5. Weapons and fire control												
21.5.2.6. Tactical barriers												
21.5.2.7. Fighting/Protective Positions												
21.5.3. Convoy Techniques TR: AFIs 36-2209, 31-301, 10-211, 36-2225, 31-101; AFPAM 10-219, Vol 3; Army FMs 7-8, 7-10, 55-30												
21.5.3.1. Convoy principles												
21.5.3.1.1. Organization												
21.5.3.1.2. Command and control												
21.5.3.1.3. Vehicle preparation												
21.5.3.1.4. Security Forces interface												
21.5.3.1.5. Counter ambush techniques												
21.5.3.1.6. Defensive ambush measures												
21.5.4. Passive Defense Techniques TR: AFPAM 10-219, Vol 2 & 5; AFIs 10-210, 10-11, 10-212, 32-4001, 31-101, 31-210, 10-401 Vol 1 & 2, 31-301; TM 5-1080-200-13/P; AFH 31-302; AFMAN 32-4005; AFPDs 31-1, 71-1; AFMD 39; AFDD 2-4.2												
21.5.4.1. Hardening/splinter protection												
21.5.4.2. Aircraft revetment TR: AFPAM 10-219, Vol 2; AFMAN 10-401 Vol 1 & 2; 32-1071 v 1-3 AFDD 2-4.2; AFM 32-4005; AFIs 31-101, 31-210, 31-301												
21.5.4.2.1. Assemble kit-type revetments												
21.5.4.2.2. Impoverished revetments												

GENERAL CONTINGENCY

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
21.5.4.3. Resource dispersal												
21.5.4.4. Camouflage, Concealment, and Deception (CCD) Techniques TR: AFPAM 10-219, Vol 2 & 3												
21.5.4.5. Terrorism TR: AFI 31-210, AFPAM 10-219, Vol 2; Joint Pub 1-02												
21.5.4.5.1. Awareness												
21.5.4.5.2. Countermeasures												
21.5.4.6. Chemical warfare protection TR: AFMAN 32-4005; AFIs 10-210, 13-218, 21-101, 32-4001; AFPAM 10-219 Vol 3 & 4; AFH 32-4014 Vol 2; AFMAN 32-4005, AFVA 32-4012												
21.5.4.6.1. Individual protective equipment												
21.5.4.6.2. Wartime threat / protective actions / procedures												
21.5.4.6.3. Decontaminating vehicle / equipment												
21.5.4.6.4. Decontaminate shelter entry point												
21.5.4.6.5. USAF standard alarm signals TR: AFPAM 10-219 Vol 2; AFVA 32-4011												
21.5.4.6.6. Protective shelters												
21.6. Base Denial TR: AFIs 10-210, 10-211; AFPAM 10-219, Vol 3; Army FM 5-250; TO 11A-1-66; WMP-1, Annex S												
21.6.1. Base denial concept												
21.6.2. Denial methods												
21.7. Multi-Contingency/Warskills Training Requirements TR: AFI 10-210; WMP-1, Annex S												
21.7.1. Multi-warskilling concept												

GENERAL CONTINGENCY

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
21.7.2. Vehicle Qualifications TR: AFI 10-210; AFPAM 10-219, Vol. 3, 4, 8; AFD 25-1; AFMAN 24-309; AFI 23-101; 25-101; AS 12; T.O.s 36A2 series, 36M2 series, 36A12 series; War & Mobilization Plan (WMP), Vol. I, Annex S; HST/RTP												
21.7.2.1. Contingency vehicles and equipment responsibilities												
21.7.2.2. Obtain government driver's license												
21.7.2.3. Qualify on contingency vehicles												
21.7.2.4. General purpose vehicles (up to 14,000 GVW)												
21.8. Explosive Ordnance Reconnaissance (EOR) TR: AFI 10-210; AFPAM 10-219, Vol 3 & 4; Army FMs 21-16, 21-75												
21.8.1. Potential ordnance												
21.8.2. Marking procedures												
21.8.3. Reporting procedures												
21.8.4. Mass ordnance clearance												
21.10. Beddown shelters TR: T.O.s 35E-5-6-1, 35E4-132-1, 35E4-94-1; TM 10-4500-200-13; AFI 10-219, Vol 2, 3 & 5												
21.10.1. Bare base concept												
21.10.2. Beddown package assets												
21.10.2.1. Harvest Eagle												
21.10.2.2. Harvest Falcon												
21.10.2.3. TEMPER Tent TR: AFPAM 10-219, Vol 2, 5; AFH 10-222, Vol 1; T.O. 35E5-6-1												
21.10.2.4. Small Shelter System (SSS) TR: TO 35E5-6-11												
21.11. Rapid Runway Repair (RRR) TR: AFIs 10-210, 10-211, 10-212; T.O.s 35E2-3-1, 35E2-2-7, 35E2-5-1; AFPAM 10-219, Vol 4												
21.11.1. Base Recovery concepts												
21.11.2. Damage assessment												
21.11.3. Damage reporting												

GENERAL CONTINGENCY

1. Tasks, Knowledge, And Technical References	2. Core Tasks	3. Certification for OJT					4. Proficiency Codes Used To Indicate Training / Information Provided					
		A	B	C	D	E	A 3 Skill Level		B 5 Skill Level		C 7 Skill Level	
		Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2)	(1) CDC	(2) SC/QTP	(1) CDC	(2) Course
21.11.4. Rapid Runway Repair (RRR) concept												
21.11.4.1. RRR Philosophy												
21.11.4.2. AM-2 Matting												
21.11.4.3. Fiberglass Mat												
21.11.5. Spall Repair												

For Reference Only

Document General

Contingency Training

IAW AFI 10-210

AFQTP Documentation Record For AFSC 3E5X1

- Download applicable AFQTPs at <http://www.afcesa.af.mil/Directorate/CEO/Training/Enlisted/enlisted.htm>
- Trainers/Certifiers enter their name and initials in the identification block at beginning of the STS
- Upon administering AFQTPs, enter start date in column 4 of this record
- Upon completion of each unit, document columns 5, 6 and 7
- Upon completion of applicable CerTests, trainer will place the completion date in column 8
- Transcribe by entering current date in columns 5 and 8, Trainees & Trainers Initials in columns 6 & 7

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	5 LEVEL * 7 LEVEL * SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
13.	SURVEYING Ref: AFQTP Module 13 – SURVEYING					
13.1.3.	Establish horizontal control	*				
13.1.4.	Measure and compute horizontal angles	*				
13.1.5.	Measure and compute horizontal distances	*				
13.1.7.	Establish vertical control	*				
13.1.17.	Perform topographic survey	*				
13.1.18.	Produce topographic map	*				
15.	DRAFTING, MANUAL Ref: AFQTP Module 15 – DRAFTING					
15.1.	Perform fundamental drafting practices	*				
15.2.	Identify/select basic American National Standards Institute (ANSI) symbols	*				

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	5 LEVEL * 7 LEVEL ♦ SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
16.	COMPUTER AIDED DESIGN (CAD)/GEOGRAPHIC INFORMATION SYSTEM (GIS) Ref: AFQTP Module 16 – COMPUTER AIDED DESIGN (CAD)/GEOGRAPHIC INFORMATION SYSTEM (GIS)					
16.1.1.	Setup Drawings	*				
16.1.2.	Utilize basic drawing commands	*				
16.1.3.	Utilize display commands	*				
16.1.4.	Create and utilize symbols	*				
16.1.5.	Utilize advanced commands	*				
16.1.6.	Utilize reference files	*				
16.1.7.	Apply scaling factors	*				
16.1.8.	Perform printing and plotting	*				
17.	BASE COMPREHENSIVE PLAN (BCP) Ref: AFQTP Module 17 – BASE COMPREHENSIVE PLAN (BCP)					
17.2.	Airfield planning criteria AFQTP in development ECD: Sep 2002	*				
17.3.	Explosive safety criteria AFQTP in development ECD: Sep 2002	*				
18.	CIVIL ENGINEER DESIGN Ref: AFQTP Module 18 - CIVIL ENGINEER DESIGN					
18.6.	Prepare materials take-offs	*				
18.7.	Estimate cost elements such as: materials, equipment and labor	*				

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	5 LEVEL * 7 LEVEL * ♦ SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
18.8.	Develop work statements AFQTP in development ECD: Sep 2002	*				
19.	CONTRACT MANAGEMENT Ref: AFQTP Module 19 – CONTRACT MANAGEMENT					
19.2.	Enforce general provisions of contracts	*				
19.3.	Conduct constructability review	*				
19.4.	Document construction activities	*				
19.5.	Evaluate construction contract progress schedule	*				
19.6.	Evaluate progress reports	*				
19.7.	Evaluate material submittals and test reports	*				
20.	AFS SPECIFIC CONTINGENCY RESPONSIBILITIES Ref: AFQTP Module 20 – AFS SPECIFIC CONTINGENCY RESPONSIBILITIES					
20.2.1.	Perform initial airfield assessment	*				
20.2.2.	Perform airfield damage assessment	*				
20.3.	Perform Explosive Ordnance Reconnaissance (EOR)	*				
20.6.	Perform Minimum Operating Strip (MOS) selection procedures and considerations	*				
20.7.	Plot airfield damage	*				

1	2	3	4	5	6	7
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	◆ * 5 LEVEL * 7 LEVEL SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS
20.13.3.	Identify Bare Base assets Ref: AFQTP, CD-Rom, BARE BASE PLANNING & LAYOUT	*				
20.14.1.	Apply Bare Base planning criteria Ref: AFQTP, CD-Rom, BARE BASE PLANNING & LAYOUT	*				
20.14.2.	Perform site selection Ref: AFQTP, CD-Rom, BARE BASE PLANNING & LAYOUT	*				
20.14.4.	Establish non-dispersed layout Ref: AFQTP, CD-Rom, BARE BASE PLANNING & LAYOUT	*				
21.18.	Force protection engineering considerations and measures Ref: AFQTP, CD-Rom, BARE BASE PLANNING & LAYOUT	*				

NOTE 1: ♦ Diamond tasks are extremely important to the career field. Diamond tasks are the same as core tasks with one exception--equipment shortfalls at most locations have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training. Hands-on certification should be accomplished at the first opportunity when equipment is available. In locations where the equipment is available for hands-on certification, CerTest completion is still a mandatory requirement.

1	2	3	4	5	6	7	8
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	♦ * 5 LEVEL * 7 LEVEL ♦ SEE NOTE 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CerTest COMP DATE
13.	SURVEYING Ref: AFQTP Module 13 – SURVEYING						
13.2.3.	Establish horizontal and vertical control by performing a traverse survey	♦					
13.2.12.	Perform a topographic survey	♦					
20.	AFS SPECIFIC CONTINGENCY RESPONSIBILITIES						
20.8.	Perform Crater Profile Measurement (CPM) operations Ref: AFQTP, CD-Rom, Crater Profile Measurement	♦					
20.10.	Layout Minimum Airfield Operating Strip Marking System (MAOSMS) Ref: AFQTP, CD-Rom, Minimum Operating Strip Layout	♦					
20.11.1.	Align MAAS Ref: AFQTP, CD-Rom, MAAS	♦					
20.11.2.	Align MAAS with Lightweight Fairlead Beams Ref: AFQTP, CD-Rom, Lightweight Fairlead Beams	♦					
20.11.3.	Align MAAS with Standard Beams with deadman anchoring system Ref: AFQTP, CD-Rom, MAAS	♦					

SECTION B - COURSE OBJECTIVE LIST (COL)

4. Measurement. Measurement of each objective is indicated as follows:

4.1. Written Test (W) – used to sample each knowledge objective and the knowledge components of performance objectives.

4.2. Performance Test (P) - used under specified conditions in a formal testing mode to measure student accomplishment of performance objectives after the teaching-learning activity has been completed.

4.3. Progress Checks (PC) - administered by the instructor during classroom or laboratory instruction time to assess the student's accomplishment of knowledge or performance objectives.

5. Standard. The standard is 70% on written examinations. Standards for performance measurement are indicated in the objectives and delineated on the individual progress checklist. Instructor assistance is provided as needed during the progress check, and students may be required to repeat all or parts of the behavior until satisfactory performance is attained.

6. Proficiency Level. Most task performance is taught to the "2b" proficiency level which means the student can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step by step procedures for doing the task.

7. Course Objective List. These objectives are listed in the sequence taught by Block of Instruction.

7.1. Initial Skills Course. A detailed listing of the initial skills course objectives may be obtained by written request to 366 TRS/DO, 727 Missile Road, Sheppard AFB TX 76311-2254.

7.2. 7-Skill Level Course. A detailed listing of the CE Craftsman Management course objectives may be obtained by written request to 366 TRS/DO, 727 Missile Road, Sheppard AFB TX 76311-2254.

SECTION C - SUPPORT MATERIALS

8. CerTest.

8.1. CerTest is a program that uses computer-based evaluation to ensure skilled craftsmen are available to meet the Air Force's changing needs. It enhances upgrade and qualification training by testing and evaluating an individual's knowledge of the principles and procedures in each specialty.

8.1.1. The program incorporates videotapes for continuation training with an inter-active computer testing program.

8.1.2. Some test items contain enhancement graphics. These graphics may be used along with a menu-driven test editor, to develop site-specific tests. Trainees may use the student tutorial to become familiar with the program.

8.2. CerTest is also a powerful training management tool. It can be used to find the strengths and weaknesses in an individual's training and experience. CerTest automatically records and updates all records. The training manager can copy records to a disk so that an individual can bring current, accurate training information to a new unit, thereby helping the gaining supervisor evaluate the trainee's knowledge and experience.

8.3 CerTest also contains optional CDC pre-evaluation tools. Volume review exercises are available for progress checks after each volume is completed. After all volumes are completed in a set, the trainee may take the certification course review exercise before the taking the final End of Course exam at the base training office. Commanders are encouraged to use these tools in their unit-training plan.

8.4. CerTest has been adopted as the Air Force platform for future electronic CDC testing. The Air Force Institute for Distributive Learning (AFIADL) began using CerTest on 1 June 2000. Currently, all CE AFSs are allowed to use CerTest on installations where Base Test Control Facilities (TCFs) are equipped. See your UETM for further information

8.5. Air Force Qualification Training Packages. See AFCESA web page for up-to-date AFQTP status.

<http://www.afcesa.af.mil/Directorate/CEO/Training/Enlisted/QTPs/3E5X1.htm>

SECTION D - TRAINING COURSE INDEX

9. Purpose. This section of the CFETP identifies training courses available for the specialty. Refer to Education and Training Course Announcements (ETCA) at web site, <https://etca.keesler.af.mil/> for complete information on the Air Force in-residence courses.

10. Air Force In-Residence/Mobile Training Team (MTT) Courses.

<u>Course Number</u>	<u>Title</u>	<u>Developer</u>
J5ABA3E531 000	Engineering Apprentice Course	366 TRS
J4AST3E571 001	Contract Construction Inspector Course (MTT)	366 TRS
J3AZP3E571 005	Construction Materials Testing	366 TRS
J3AZP3E571 003	Engineering Design	366 TRS
J3AZP3E571 004	Construction Surveying	366 TRS
J3ACR3E070 000	Civil Engineer Management Craftsman Course	366 TRS

11. Extension Course Institute (AFIADL) Courses.

<u>Course Number</u>	<u>Title</u>	<u>Date</u>
CDC 55351A/B	Engineering Journeyman	Apr 02

12. Exportable Courses/Information.

<u>Course Number</u>	<u>Title</u>	<u>Date</u>
Civil Engineer Management Craftsman Course --Part A (exportable) version 2.1		Jul 01

13. Courses Under Development/Revision.

<u>Course Number</u>	<u>Title</u>	<u>Date Due</u>
J5ABA3E531 000	Engineering Apprentice	Jan 02
J3AZP3E571 003	Engineering Design	Jan 02
J3AZP3E571 004	Construction Surveying	Apr 02
J4AST3E571 001	Contract Construction Inspector (MTT)	Mar 02
CDC 3E551 A	Engineering Journeyman (AFSC 3E551)	Apr 02
CDC 3E551 B	Engineering Journeyman (AFSC 3E551)	Nov 02

SECTION E - MAJCOM UNIQUE REQUIREMENTS

“There are currently no MAJCOM unique requirements. This area is reserved.”

SECTION F - HOME STATION TRAINING

15. Purpose. The purpose of this section is to identify the tasks, training references, and training sources available in support of contingency/wartime training. Training ranges from knowledge-type training conducted in a classroom to task-oriented (hands-on) training conducted in the field. These training requirements, frequencies, and sources are listed in AFI 10-210, Prime Base Emergency Engineer Force (BEEF) Program.

15.1. Home Station Training (HST). HST is training that is conducted at the individual's home station for contingency operations.

15.1.1. Category I (CAT-I) training consists of knowledge-level training such as Prime BEEF orientation, field sanitation, and expedient methods. CAT-I training is normally accomplished through briefings and the use of videos and other training aids. These various training aids are listed in AFI 10-210, Attachment 2 under the "Optional Source for Training Material" column.

15.1.1.1. . The "General Contingency Responsibilities" (GCR), CD-ROM Training Package may be used for Category I contingency training. Successful completion of the lessons in the GCR CD-ROM will satisfy those SORTS requirements indicated in AFI 10-210, Chapter 4 and Attachment 2. It can be used for training and evaluation and is based on successful completion of one or more lessons completed in any order. One, some or all lessons may be completed at a given time. At the end of each lesson, the trainee will successfully complete the Lesson Review Exercise (LRE) and receive a certificate of training generated by the CD-ROM. The trainee must present the certificate or certificates to the Readiness Training Monitor to receive credit for the training.

15.1.1.2. Also available are various volumes of Home Station Training CD-ROM packages. These disks contain up to five presentations covering various CAT I topics. These are an additional method of providing required recurring training and topics covered are indicated in the training material column of Attachment 2 by the letters "PBCD".

15.1.1.3. For personnel assigned to a unit with a Prime BEEF mission for the first time, the 3-Level General Contingency Responsibilities CD-ROM is to be completed within the first 90 days of assignment. This product contains 17 lessons covering CAT I training topics. CAT I credit can be given for completion of these lessons for the same areas as the previously mentioned General Contingency Responsibilities product as indicated in AFI 10-210. Completion certificates should be presented to the Readiness Training Monitor for documentation of training.

15.1.1.4. The Unit should develop procedures to use these products to suit their needs. Remember these are tools to assist you in fulfilling CAT I training requirements. Document this training as outlined in AFI 10-210.

15.1.2. Category II (CAT-II) training is primarily task-oriented training such as weapons training, hard-back tent construction, and convoy security and the hands-on portion of various CAT I topics. This training is listed in AFI 10-210, Attachment 3 can be conducted during regularly required field training exercises.

15.2. Training References.

15.2.1. AFI 10-210, Prime Base Engineer Emergency Force (BEEF) Program. Chapter four of AFI 10-210 identifies the Prime BEEF recurring training requirements. You can review this document by going to the Air Force publications web site. Attachment 2 is a list of HST CAT-I training requirements and Attachment 3 lists CAT-II training requirements.

15.2.2. Prime BEEF Contingency and Wartime Tasks - AFPAM 10-219, Vol 10. The Contingency Training Guide and Task Standards (AFPAM 10-219, Vol 10) lists basic wartime skills, knowledge, and the major common contingency/wartime tasks that Prime BEEF teams will be required to perform. The Contingency Training Guide and Task Standards identify the AFSs associated with each task, required resources to accomplish the task, and the maximum time (under optimum conditions) expected to complete the task. The document also identifies the lead AFS on each task. This document is located on the Air Force Publications Web site.

15.2.3. AFPAM 10-219 Series. These documents assist in home station training and contingency responses. They replaced the AFP 93-12 series of planning documents and are available on the Air Force Electronic Publications Library (AFEPL).

15.2.4. Air Force Education and Training Course Announcements (ETCA). Superseded AFCAT 36-2223. It is located at the following URL: <http://hq2af.keesler.af.mil/etca.htm> lists additional training/educational opportunities available for civil engineer personnel. This catalog contains information on formal education and training courses. The catalog is updated quarterly.

15.2.5. Readiness Training Package (RTP). RTPs are lesson plans for HST lessons. The RTPs are intended for those personnel who teach any area of HST. The index and RTPs are located on the Air Force Civil Engineer Support Agency (AFCESA) home page. The internet address for this information is <https://wwwmil.afcesa.af.mil>.

15.2.6. Other Documents. AFH 10-222, Bare Base Development, Bare Base Facility Erection, Force Protection, Mechanical Systems, Bare Base Assets, Bare Base Generators and other volumes in the AFH 10-222 series are used for contingency training and operations. The AFH series are pocket guides providing information on bare base systems for all AFSs. AFH 10-222, Vol 4, Air Force Environmental Handbook for Contingency Operations, was developed to assist the environmental career field (3E4X3) on environmental quality issues during contingency and training operations. The

hand-book can be used by any AFS who works closely with environmental issues. Visit the Air Force Publications web site to down load this information.

15.2.7. AFCESA/CEX. Maintains a comprehensive listing of audiovisual products that support the contingency training program. To view this listing as well as gain information on how to order specific audiovisual products, please consult the AFCESA Contingency Support page.

15.3. Ancillary Training.

15.3.1. Team Exercise Sites (CAT III). All CE personnel who fill critical Unit Type Code (UTC) positions will receive team training at Silver Flag Exercise Sites (SFES) with the exception of members on headquarters staff augmentation UTCs, pavement evaluation UTCs, and generator repair and maintenance UTCs. There are currently three active SFES in the world today. They are located at Tyndall AFB, FL; Ramstein AB, Germany; and Kadena AB, Japan. Active duty personnel in critical UTC positions will be qualified at least every 30 months on the elements listed in table 4.3 of AFI 10-210. The Air Reserve Components (ARC) will be qualified at least every 45 months.

15.3.2. AEF/Spin-up Training. The AFCESA home page has the worldwide locator for the different types of training, locations, and Points Of Contact (POC) for equipment items that may be encountered during contingency operations.